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LEVELED-WAVE MODEL OF SPINODAL
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The model structures have uniform phase compositions and sharp interfaces, and are generated (à la Cahn & Charles) from a superposition of random waves. Statistical properties of the model are embodied in the autocorrelation function, which is calculated by a stochastic-theoretic method. N. F. Berk (*Phys. Rev. A*, 1991) gave a related theory of the scattering. Model properties and validity are here examined, emphasizing their dependence on the wavelengths used to generate the structure and on the volume fractions of the phases. Typical computer-generated morphologies are shown. Scattering and real-space morphological averages are calculated. An anomalous forward scattering is predicted. Turbidity correlations with real-space measurements are given. Spinodal decomposition in a poorly-mixed solution is discussed.

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